

Figure 1. Schematic representation of a novel approach to promote oxidative stabilization process where PITCH stands for pitch/PAN/rayon carbon precursor.

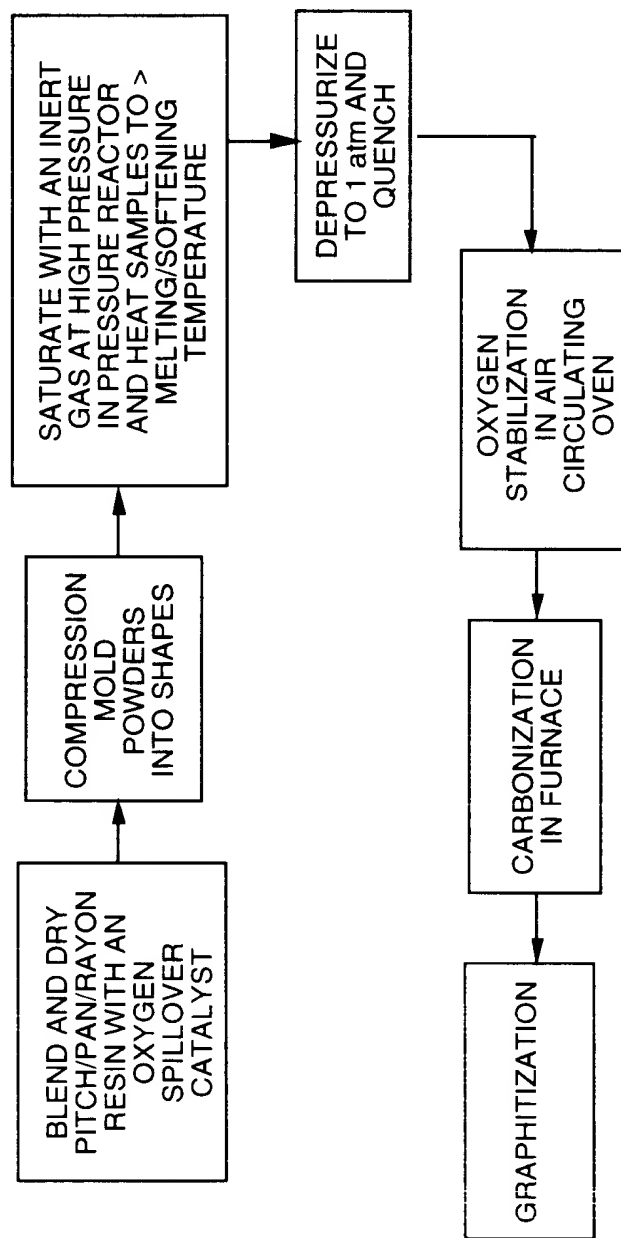


Figure 2. Sequence for the processing of microcellular carbon foam blended with an oxygen spillover catalyst.

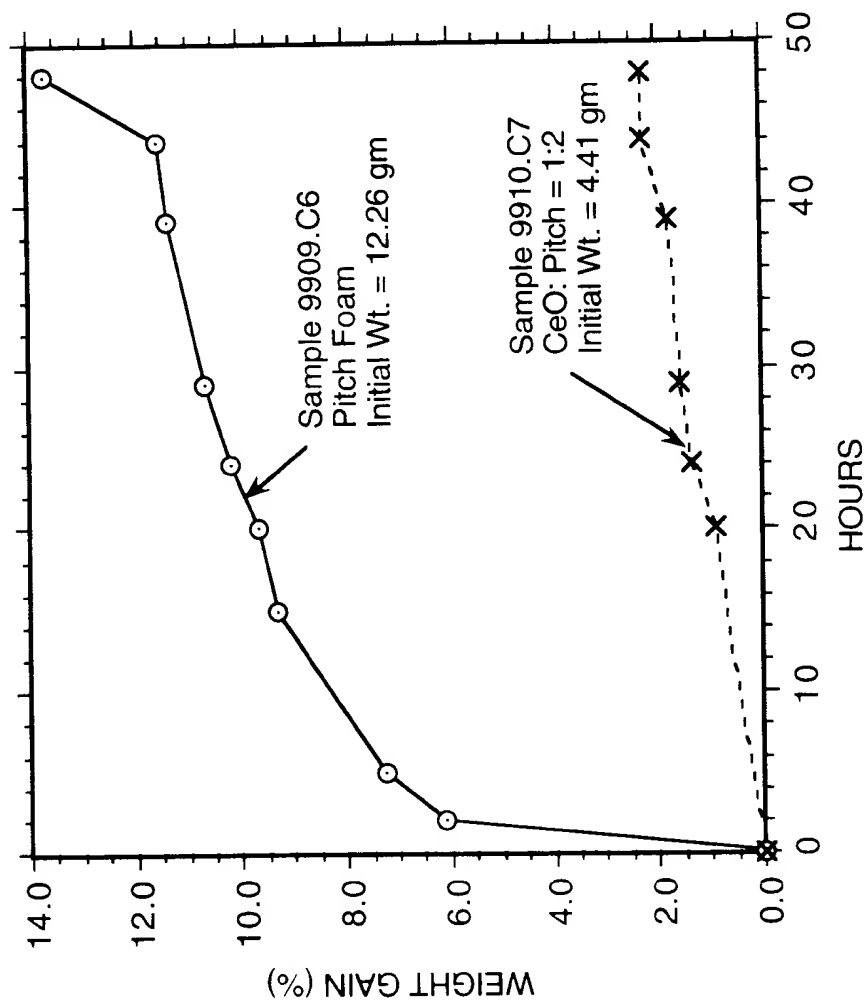


Figure 3. Percentage weight gain as a function of time during the oxygen stabilization process of microcellular carbon foams with and without cerium oxide catalyst.

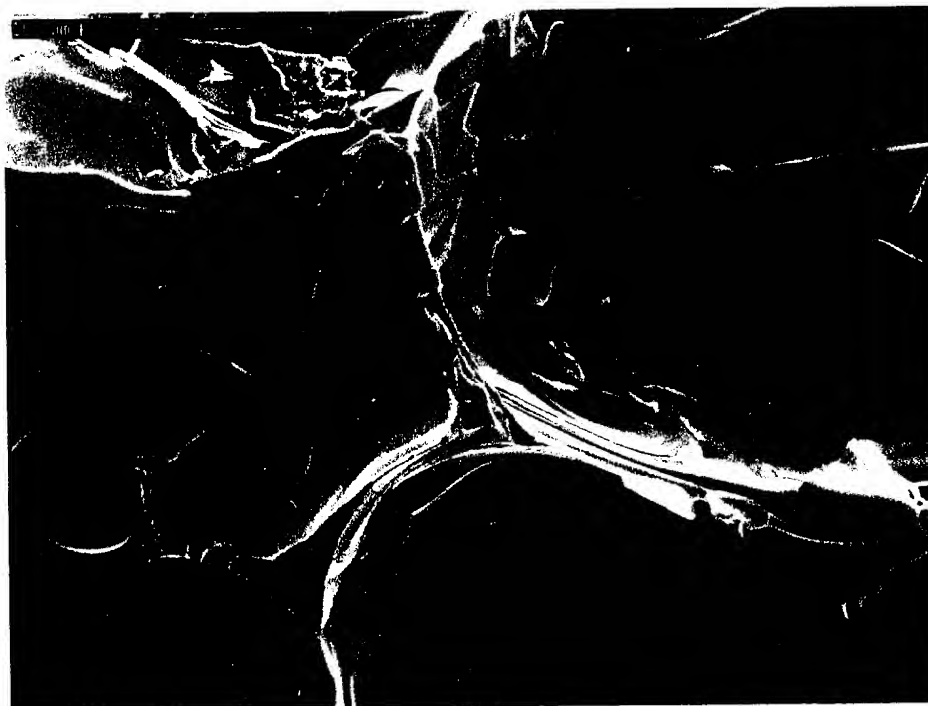
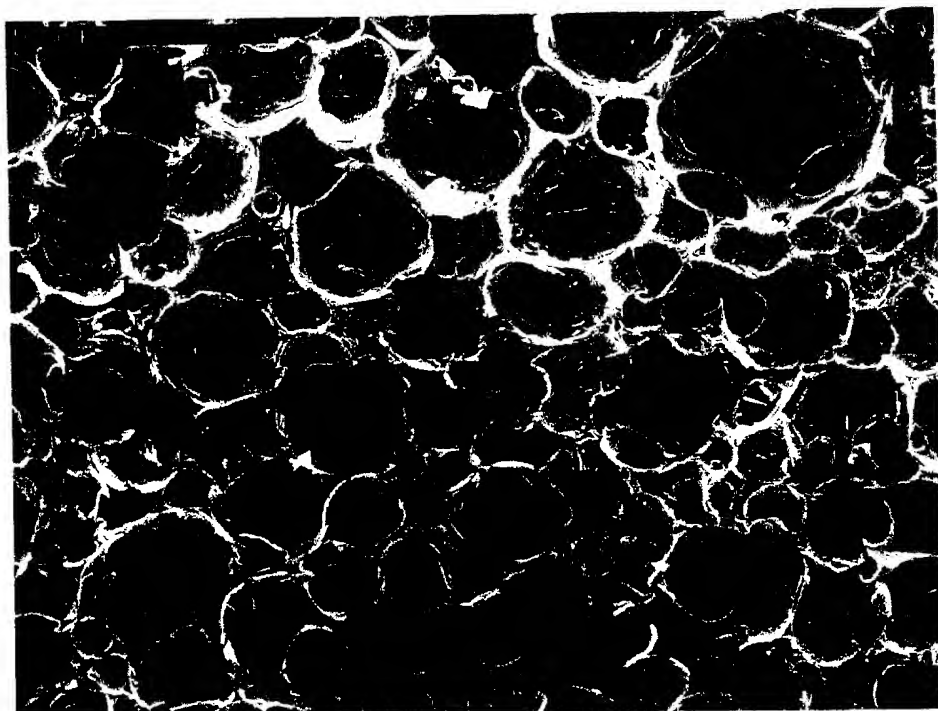


Figure 4. SEM photomicrographs of our low density carbon foams show uniform cell size.

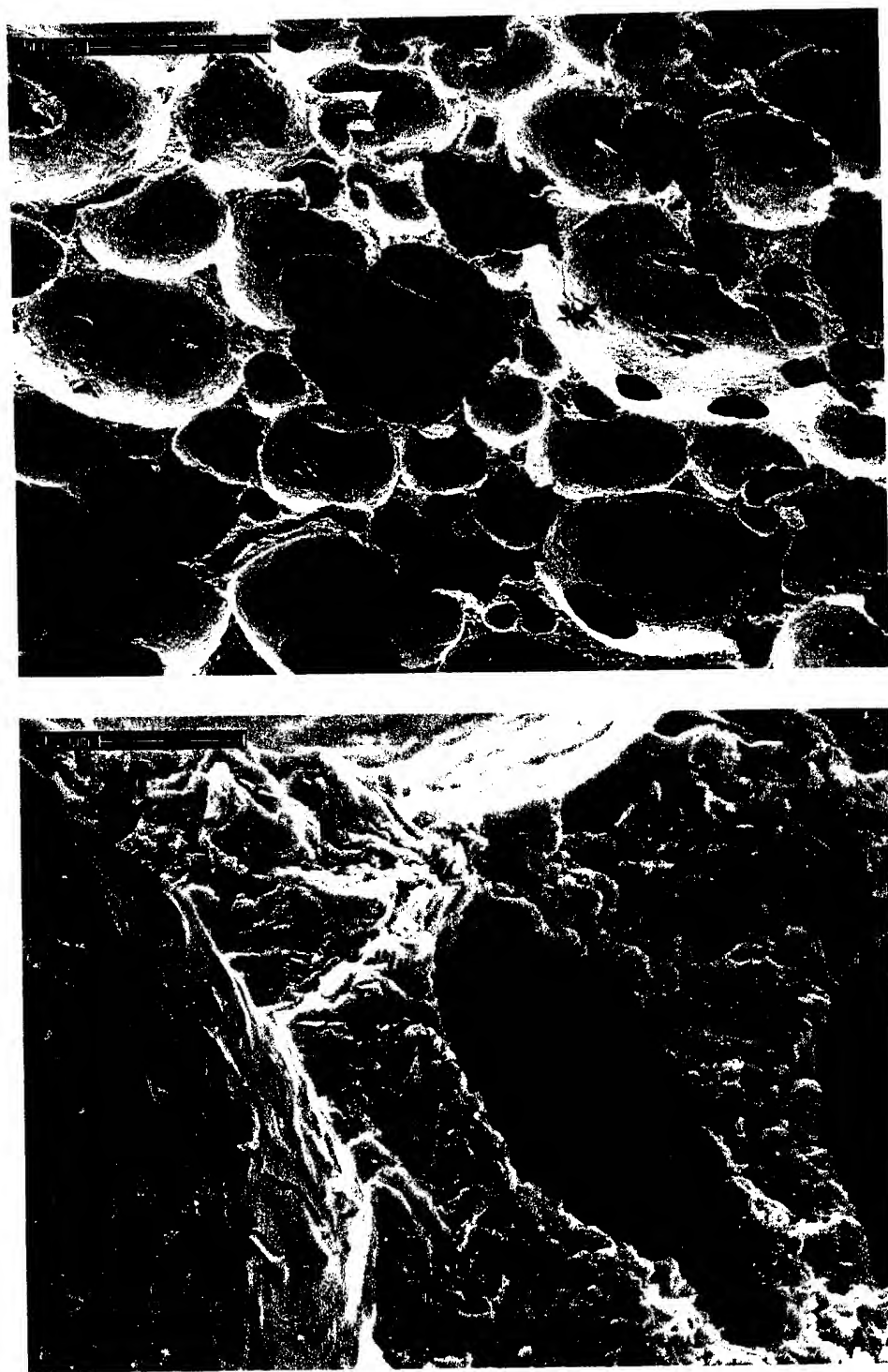


Figure 5. SEM fractograph of carbon foam with 10% nano iron oxide reveals an excellent orientation of heckle formation.



Figure 6. An exploded view of the foam sample with iron oxide nano powders reveals substantial amount of carbon nano fibers (CNF) grown from the iron oxide powders.



Scale bar = 600 microns.

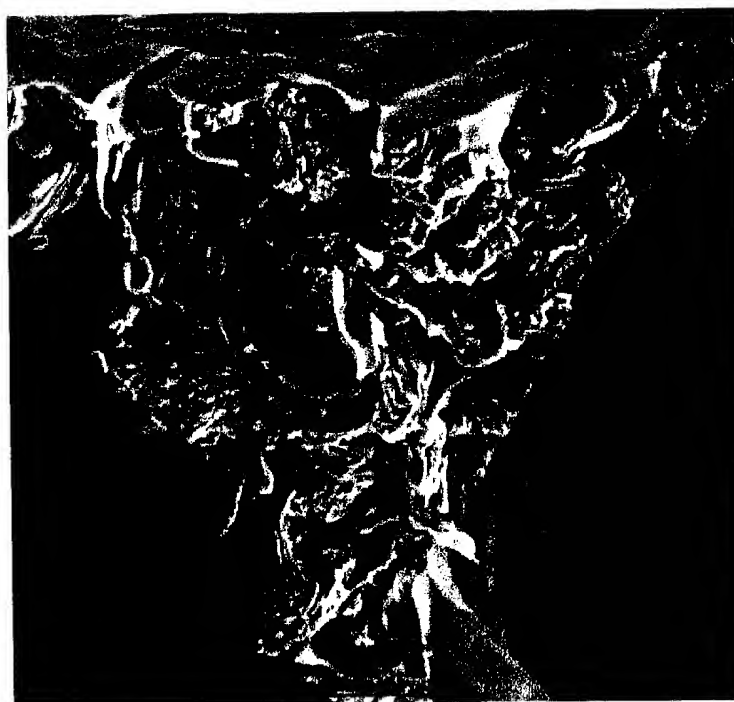


Figure 7. SEM fractograph of the fractured cell wall of a carbon foam with 33% of cerium oxide. Scale bar = 30 microns.

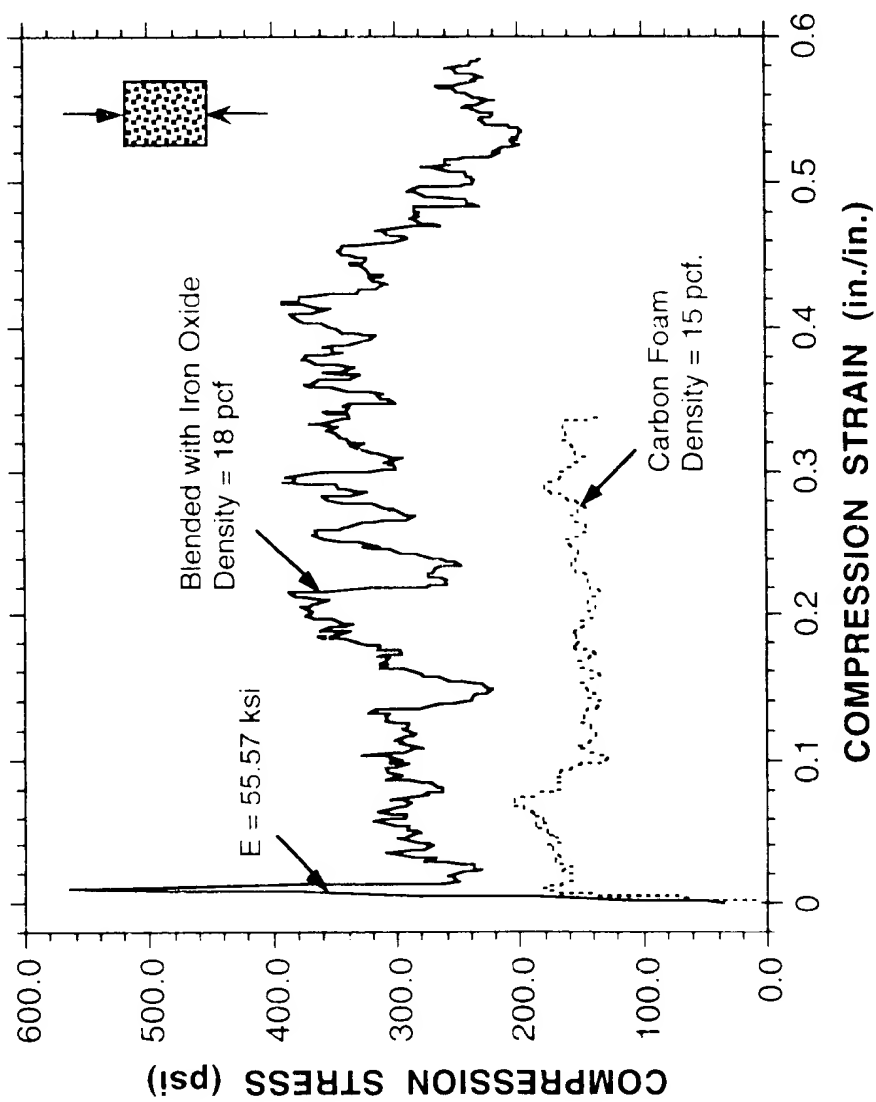


Figure 8. Compression stress-strain curves of graphitic foams with 5% of and without Iron oxide nano powders.

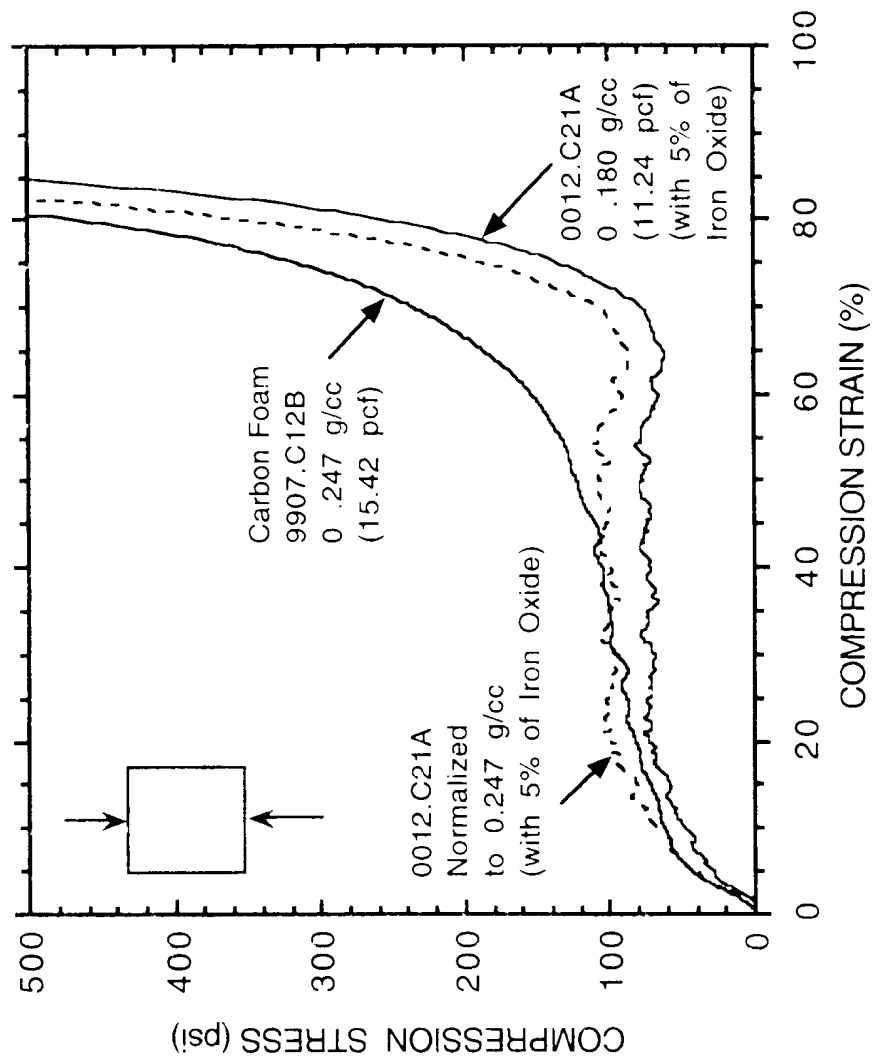


Figure 9. Compression stress-strain curves of carbon foams with 5% and without Iron oxide.

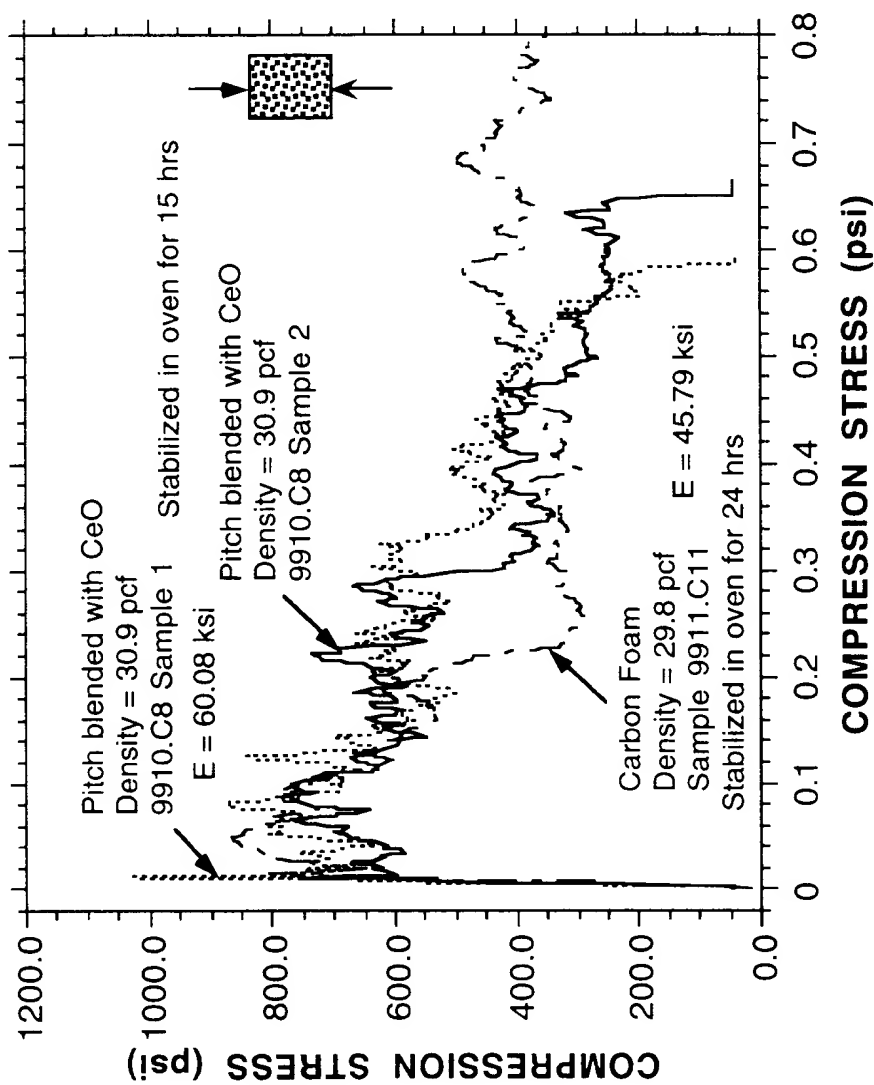


Figure 10. Compression stress-strain curves of carbon foams with 33% of and without Cerium oxide.

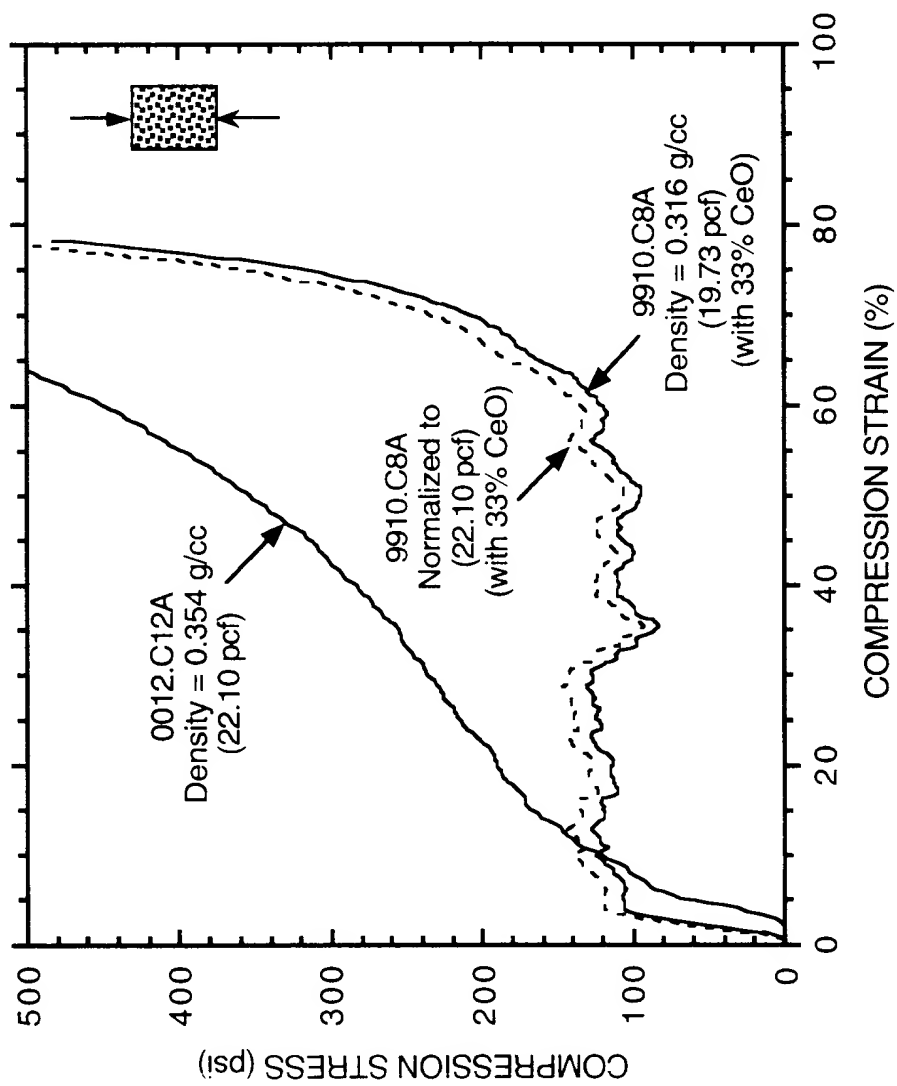


Figure 11. Compression stress-strain curves of graphitic foams with 33% of and without Cerium oxide.

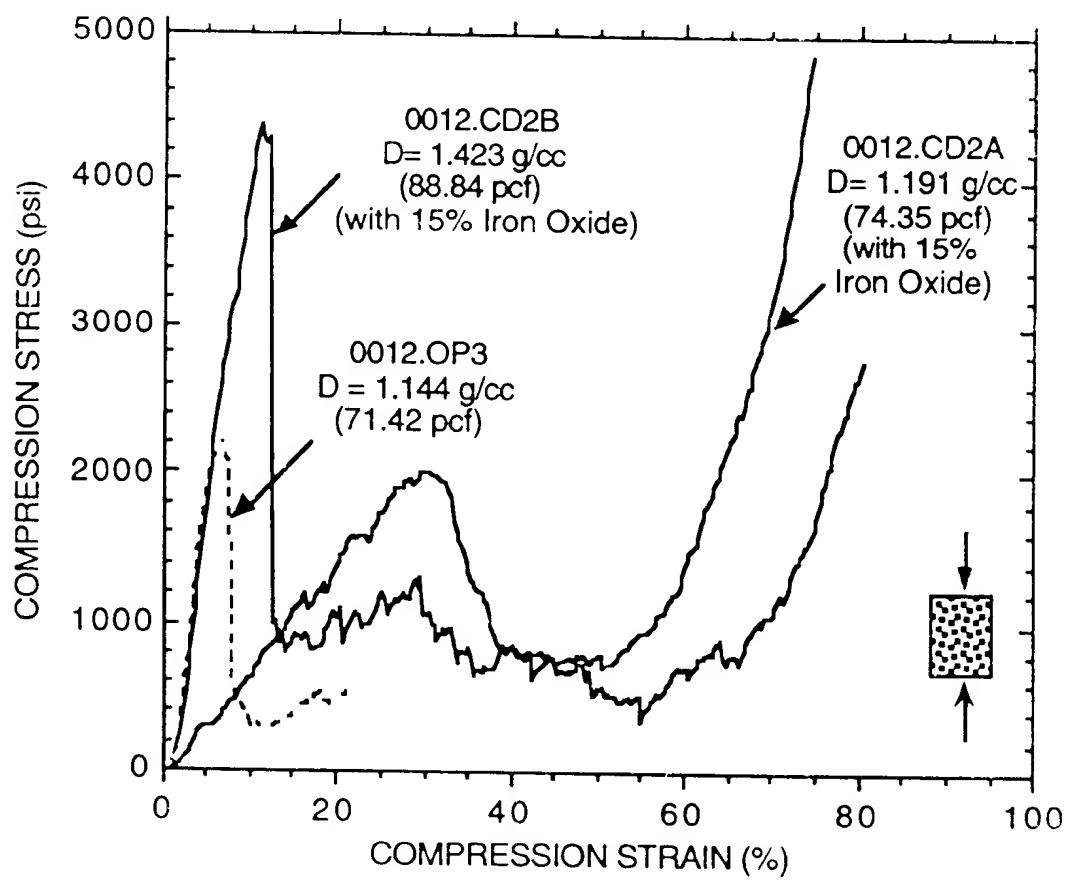
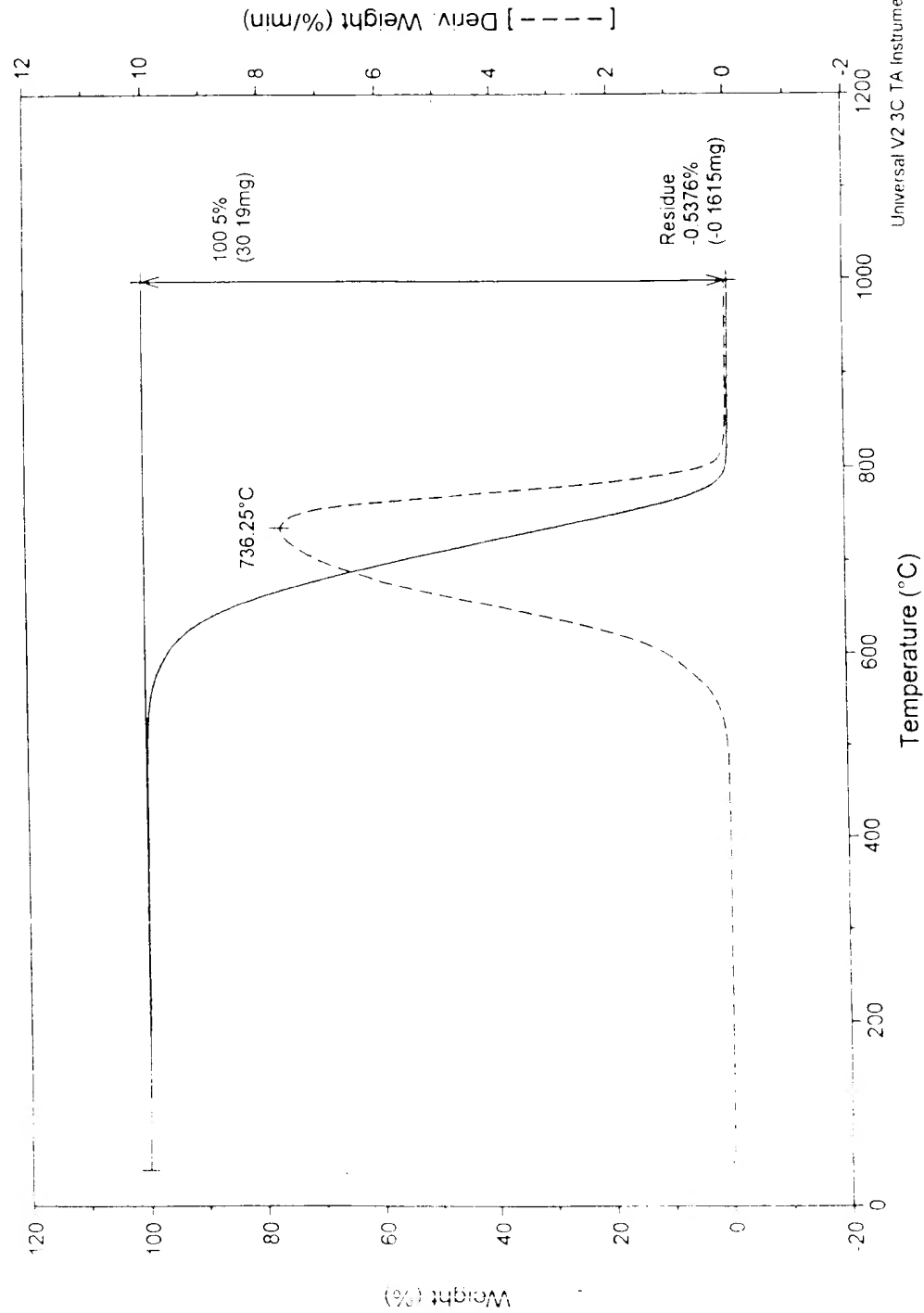


Figure 12. Compression stress-strain curves of solid graphitic panels with 15% of and without Iron oxide.

Sample WMR 9710 19
Size 30.0310 mg
Method TGA-ni-temp
Comment 10C/min

Fig. 13 TGA

File: C:\TA\DATA\TGA\ga1760 C1
Operator: mg
Run Date: 20-Dec-99 16:08



Sample CPM 0012.
Size 12.2800 mg
Method TGA-hs-temp
Comment 10°C/min/air

File C:\TA\Data\TGA\1860.01
Operator: mg
Run Date 30-Mar-01 09:40

Fig. 14 TGA

